

IN THE CLAIMS:

Please amend the claims as follows:

1. (Original) A synthetic peptide comprising the amino acid sequence GPRLGYSWHX, wherein the amino acids are D-amino acids and X is any amino acid.

2. (Original) A peptide according to claim 1, wherein X is E, Q, P or G.

3. (Currently Amended) A peptide according to ~~either of~~ claims 1 ~~or 2~~, comprising the amino acid sequence GPRLGYSWHE (SEQ ID NO:1).

4. (Currently Amended) A peptide according to ~~any one of~~ claims 1 to 3, which further includes a cysteine residue at the C-terminus end.

5. (Original) A peptide according to claim 4, comprising the amino acid sequence GPRLGYSWHEC (SEQ ID NO:2).

6. (Currently Amended) A vaccine composition capable of eliciting an immunological response in an animal to which it is administered, the composition comprising:

- (a) an immunogenic peptide according to ~~any one of~~ claims 1 to 5; and
- (b) a pharmaceutically acceptable carrier or excipient.

7. (Original) A vaccine composition according to claim 6, wherein the peptide is not conjugated to or administered with a carrier or an adjuvant.

8. (Original) A vaccine composition according to claim 6, wherein the peptide is conjugated to or administered with at least one carrier or adjuvant.

9. (Original) A vaccine composition according to claim 8, wherein the adjuvant is selected from the group consisting of CpGs, M59, IFA (incomplete Freund's

adjuvant), complete Freund's adjuvant, alum, bile salts, vitamins and attenuated toxins.

10. (Original) A vaccine composition according to claim 9, wherein the attenuated toxins are selected from pertussis and cholera.

11. (Currently Amended) A vaccine composition according to ~~any one of~~ claims 6 ~~to~~ 10, for use in a method of contraception or for controlling fertility or heat in an animal.

12. (Currently Amended) A vaccine composition according to ~~any one of~~ claims 6 ~~to~~ 11, for use in treating a disease in an animal.

13. (Currently Amended) A vaccine composition according to ~~any one of~~ claims 6 ~~to~~ 12, wherein the animal is a human, a domestic animal, a wild animal, livestock or a fish.

14. (Currently Amended) A vaccine composition according to ~~either of~~ claims 12 ~~or~~ 13, wherein the disease is a sex hormone-related disease in a human.

15. (Currently Amended) A vaccine composition according to claim 14, wherein the disease is selected from the group consisting of prostatic cancer, breast cancer, ovarian cancer, uterine cancer, endometriosis, uterine fibroids ~~or~~ and precocious puberty.

16. (Currently Amended) A vaccine composition according to ~~any one of~~ claims 6 ~~to~~ 15, which is administered orally, nasally, sub-cutaneously or trans-cutaneously to the animal.

17. (Currently Amended) A method of treating a disease in an animal by administering a peptide according to ~~any one of~~ claims 1 ~~to~~ 5 to the animal in an amount sufficient to elicit an immune response against GnRH in the animal.

18. (Original) A method according to claim 17, wherein the disease is a sex hormone-related disease in a human.

19. (Currently Amended) A method according to claim 18, wherein the disease is selected from the group consisting of prostatic cancer, breast cancer, ovarian cancer, uterine cancer, endometriosis, uterine fibroids or and precocious puberty.

20. (Currently Amended) A method of controlling fertility in an animal by administering a peptide according to ~~any one of~~ claims 1 to 5 to the animal in an amount sufficient to elicit an immune response against GnRH which inhibits or substantially reduces fertility of the animal.

21. (Currently Amended) A method of controlling the heat cycle in an animal by administering a peptide according to ~~any one of~~ claims 1 to 5 to the animal in an amount sufficient to elicit an immune response against GnRH which inhibits or delays the heat cycle of the animal.

22. (Currently Amended) A method of contraception comprising the step of administering to an animal a peptide according to ~~any one of~~ claims 1 to 5.

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Currently Amended) A peptide according to ~~any one of~~ claims 1 to 5, which is conjugated to another peptide.

29. (Currently Amended) A peptide according to claim 28 23, which is conjugated to the natural gonadotropin-releasing hormone (GnRH) peptide.